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Mazdoor Kisan Shakti Sangathan

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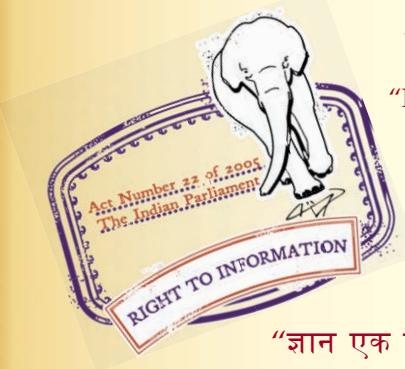
“Step Out From the Old to the New”

IS 7795 (2004): Hexagon Nuts with Collar [PGD 31: Bolts, Nuts and Fasteners Accessories]

“ज्ञान से एक नये भारत का निर्माण”

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“ज्ञान एक ऐसा खजाना है जो कभी चुराया नहीं जा सकता है”

Bhartṛhari—Nītiśatakam

“Knowledge is such a treasure which cannot be stolen”





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(पहला पुनरीक्षण)

*Indian Standard*

HEXAGON NUTS WITH COLLAR — SPECIFICATION  
(*First Revision*)

ICS 21.060.20

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BUREAU OF INDIAN STANDARDS  
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## FOREWORD

This Indian Standard (First Revision) was adopted by the Bureau of Indian Standards, after the draft finalized by the Bolts, Nuts and Fasteners Accessories Sectional Committee had been approved by the Basic and Production Engineering Division Council.

This standard was first published in 1975. This first revision has been taken up to incorporate the development taken place in the field and also updated editorially and technically in line with DIN 6331 : 1991 'Hexagon nuts 1.5 times the thickness with collar, Metric thread' issued by the Deutsches Institut für Normung (DIN).

For the purpose of deciding whether a particular requirement of this standard is complied with, the final value, observed or calculated, expressing the result of a test or analysis shall be rounded off in accordance with IS 2 : 1960 'Rules for rounding off numerical values (*revised*)'. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

## *Indian Standard*

# HEXAGON NUTS WITH COLLAR — SPECIFICATION (First Revision)

### 1 SCOPE

This standard covers the requirements of hexagon nuts with collar in the size range of M 8 to M 36 mm.

### 2 REFERENCES

The following standards contain provisions which through reference in this text, constitute provisions of this standard. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this standard are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below:

<i>IS No.</i>	<i>Title</i>	<i>IS No.</i>	<i>Title</i>
1367	Technical supply conditions for threaded steel fasteners:	(Part 4) : 2001	Selected sizes for screws, bolts and nuts ( <i>second revision</i> )
(Part 1) : 2002	General requirements of bolts, screws, studs and nuts ( <i>third revision</i> )	14962	ISO general purposes metric screw threads — Tolerances :
(Part 2) : 2002	Tolerance for fasteners — Bolts, screws, studs and nuts — Product grades A, B and C ( <i>third revision</i> )	(Part 1) : 2001	Principles and basic details
(Part 6) : 1994	Mechanical properties and test methods for nuts with specified proof load ( <i>third revision</i> )	(Part 2) : 2001	Limits of sizes for general purposes internal and external screw threads — Medium quality
(Part 10) : 2002	Surface discontinuity of nuts ( <i>third revision</i> )	(Part 3) : 2001	Deviations for constructional screw threads
(Part 13) : 1983	Hot-dip galvanized coating on threaded fasteners ( <i>second revision</i> )	(Part 4) : 2001	Limits of sizes for hot-dip galvanized external screw threads to mate with internal screw threads tapped with tolerance position H or G after galvanizing
(Part 17) : <sup>1)</sup>	Inspection, sampling and acceptance procedure ( <i>fourth revision</i> )	(Part 5) : 2001	Limits of sizes for hot-dip galvanized internal screw threads to mate with external screw threads with maximum size of tolerance position h before galvanizing
(Part 18) : 1996	Packaging ( <i>third revision</i> )		
4218	ISO General purpose metric screw thread :		
(Part 1) : 2001	Basic and design profiles ( <i>second revision</i> )		
(Part 2) : 2001	General plan ( <i>second revision</i> )		
(Part 3) : 1999	Basic dimensions ( <i>second revision</i> )		

### 3 PRODUCT GRADE

The nuts shall be of product grade A as specified in IS 1367(Part 2).

### 4 DIMENSIONS

**4.1** The dimensions of nuts shall be as given in Table 1 when read with Fig. 1.

**4.2** The threads of the nuts shall be in accordance with IS 4218 (Parts 1, 2, 3 and 4). The tolerances on the threads shall conform to IS 14962 (Parts 1, 2 and 3) and in case of hot-dip galvanized nuts the tolerance shall be in accordance with IS 14962 (Parts 4 and 5).

### 5 MECHANICAL PROPERTIES

The nuts shall conform to the property class 8 or 10 as specified in IS 1367 (Part 6).

<sup>1)</sup> To be published.

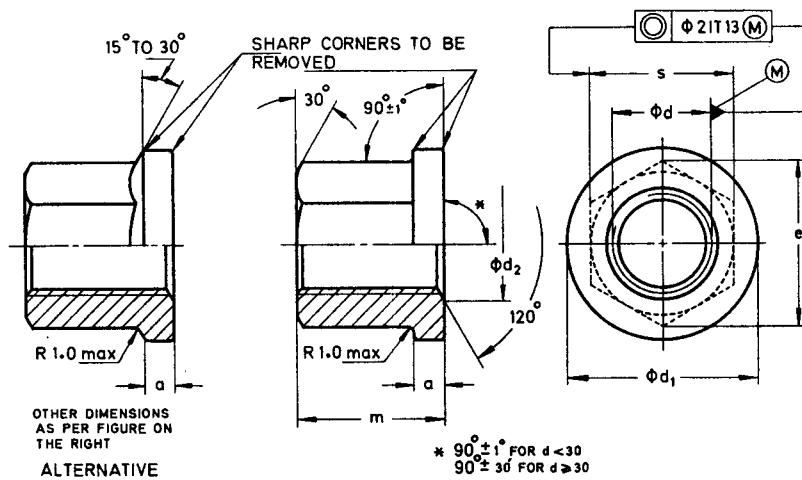


FIG. 1 DIMENSIONS OF HEXAGON NUTS WITH COLLAR

Table 1 Dimensions for Hexagon Nuts with Collar

(Clause 4.1)

All dimensions in millimetres.

Sl No. (1)	Thread Size, $d$ (2)	M 8 (3)	M 10 (4)	M 12 (5)	M 16 (6)	M 20 (7)	M 24 (8)	M 30 (9)	M 36 (10)
i)	$d_1$ Nom Max Min	18 18.00 17.73	22 22.00 21.67	25 25.00 24.67	31 31.00 30.61	37 37.00 36.61	45 45.00 44.61	58 58.00 57.54	68 68.00 67.54
ii)	$a$ Nom Max Min	3.5 3.65 3.85	4 4.15 3.85	4 4.15 3.85	5 5.15 4.85	6 6.15 5.85	6 6.15 5.85	8 8.18 7.82	10 10.18 9.82
iii)	$d_2$	10	12	14	18	22	26	32	38
iv)	$m$ Nom Max Min	12 12.35 11.65	15 15.35 14.65	18 18.35 17.65	24 24.42 23.58	30 30.42 29.58	36 36.50 35.50	45 44.50 43.50	54 54.60 53.40
v)	$e$ Min	14.38	17.77	20.03	26.75	33.53	39.98	51.28	61.31
vi)	$s$ Nom Max Min	13 13.00 12.73	16 16.00 15.73	18 18.00 17.73	24 24.00 23.67	30 30.00 29.67	36 36.00 35.38	46 46.00 45.38	55 55.00 54.26

## 6 FINISH

**6.1** Unless otherwise specified, the nuts shall be supplied in the dull black heat-treated condition with a residual coating of light oil.

**6.2** If supplied hot-dip galvanized, they shall be galvanized in accordance with the requirements of IS 1367 (Part 13).

## 7 GENERAL REQUIREMENTS

**7.1** In regard to permissible surface discontinuities, the nuts shall conform to IS 1367 (Part 10).

**7.2** In regard to the requirements not covered in this standard, the nut shall conform to the general requirements given in IS 1367 (Part 1).

## 8 DESIGNATION

The hexagon nuts with collar shall be designated by name, size, and property class and number of this standard. In case of hot-dip galvanized nuts the word 'galvanized' shall be added to the designation.

*Example*

A high strength structural nut of size M 10, property class 8 and galvanized shall be designated as:

Hexagon nut with Collar M 10 IS 7795 — 8  
Galvanized.

## 9 SAMPLING, INSPECTION AND ACCEPTANCE CRITERIA

The sampling, inspection and acceptance criteria of nuts shall be in accordance with IS 1367 (Part 17).

## 10 MARKING

**10.1** The high strength structural nuts shall be marked with the following :

- a) Manufacturer's identification symbol; and
- b) Property class 8 or 10.

**10.1.1** The marking shall be indented or embossed on the non-bearing face of the nut.

## 10.2 BIS Certification Marking

The product may also be marked with the Standard Mark. Wherever it is not possible to put the Standard Mark on the product, it may be marked on the packaging.

**10.2.1** The use of the Standard Mark is governed by the provision of the *Bureau of Indian Standards Act, 1986* and the Rules and Regulations made thereunder. The details of conditions under which the licence for the use of the Standard Mark may be granted to the manufacturers or producers may be obtained from the Bureau of Indian Standards.

## 11 PACKAGING

The packaging of hexagon nuts with collar shall be done in accordance to IS 1367 (Part 18).

## Bureau of Indian Standards

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### Amendments Issued Since Publication

Amend No.	Date of Issue	Text Affected

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